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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/362,982	07/30/1999	SHINICHI TANIGUCHI	003510-043	7542

21839 7590 10/29/2002

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EXAMINER

SHERR, CRISTINA O

ART UNIT	PAPER NUMBER
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3621

DATE MAILED: 10/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/362,982

Applicant(s)

SHINICHI TANIGUCHI

Examiner

Cristina O Sherr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to Applicant's Amendment filed 1 August 2002. Claims 1 – 20 remain pending as originally filed in this action.

Response to Arguments

2. Applicant's arguments with respect to claims 1 - 20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 7 and 11 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caci (US 6,154,658A) in view of Pinault (US5,913,15A).
5. Caci discloses a vehicle-mounted communication device comprising transmitting/receiving means provided for communication of information with road- side communication means located at a road side; and relay means for relaying encryption information received from the road side by said transmitting/receiving means to an IC card which includes storage means for storing user information regarding a balance of charges and which also includes encryption means that encrypts and outputs output information based on the user information and decodes encrypted input information regarding the user information (Col. 2 In 41 – Col 3 In 66);

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wherein said relay means relays the output information encrypted by the IC card to said transmitting/receiving means (Col. 2 In 41 – Col 3 In 66);

further comprising encryption information storage means in which the encryption information is temporarily stored, wherein said transmitting! receiving means stores the encryption information in said encryption information storage means and transmits as is the encryption information stored in said encryption information storage means (Col. 2 In 41 – Col 3 In 66);

wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (Col. 2 In 41 – Col 3 In 66);

a vehicle-mounted communication device according to claim 2, above, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col. 2 In 41 – Col 3 In 66);

further comprising encryption information storage means in which the encryption information is temporarily stored, wherein said transmitting/receiving means stores the encryption information in said encryption information storage means and transmits as is the encryption information stored in said encryption information storage means (Col. 2 In 41 – Col 3 In 66);

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wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (Col. 2 In 41 – Col 3 In 66);

a vehicle-mounted communication device according to claim 3, above, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col. 2 In 41 – Col 3 In 66);

wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (Col. 2 In 41 – Col 3 In 66);

a vehicle-mounted communication device according to claim 4, above, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col. 2 In 41 – Col 3 In 66);

wherein the transmitted information is accounting information regarding accounting processing of charged facilities (Col. 2 In 41 – Col 3 In 66);

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road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col. 2 In 41 – Col 3 In 66);

wherein road-side encryption means of said road-side control means installed at an entrance gate effects encryption of transmitted information and road-side encryption means of said road-side control means installed at a toll reception gate effects only decoding of received information (Col. 2 In 41 – Col 3 In 66).

6. Caci, does not, however, disclose a road-to-vehicle communication device wherein the transmitted information is accounting information regarding accounting processing of charged facilities (Pinault Col 4 In 48 – Col 5 In 67). Pinault, however, does, as noted above. It would be obvious to one of ordinary skill in the art to combine the teachings of Caci and Pinault in order to obtain greater security in road to vehicle communications.

7. Claims 8 – 10 and 17 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caci (US 6,154,658A) in view of Pinault (US5,913,15A).

8. Caci discloses a road-to-vehicle communication device comprising road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with vehicle-mounted communication means, and also including first encryption means for encrypting transmitted information and decoding received information, with a first electronic key; information control means

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including information transfer means which stores therein user information regarding at least one of a vehicle and a user and through which information is mutually transferred with respect to the vehicle-mounted communication means, and also including second encryption means for encrypting output information and decoding input information, with a second electronic key; and vehicle-mounted control means being installed on a vehicle side, including vehicle-mounted communication means provided for intercommunication of information with respect to the road-side communication device and for mutual transfer of information with respect to said information control means, and also including third encryption means which, during the communication of information, encrypts transmitted information and decodes received information with the first electronic key, and which during the transfer of information, encrypts output information and decodes input information with the second electronic key (Col. 2 In 41 – Col 3 In 66);

wherein each group of said first encryption means and the road-side communication means, said second encryption means and the information transfer means, and said third encryption means and the vehicle-mounted communication means are provided on the same substrate (Col. 2 In 41 – Col 3 In 66);

wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (Col. 2 In 41 – Col 3 In 66);

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a road-to-vehicle communication device comprising a vehicle-mounted communication device according to claim 17, above, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col. 2 In 41 – Col 3 In 66);

9. Caci does not, however, disclose a road-to-vehicle communication device according to claim 18, above, wherein road-side encryption means of said road-side control means installed at an entrance gate effects encryption of transmitted information and road-side encryption means of said road-side control means installed at a toll reception gate effects only decoding of received information (Pinault Col 4 In 48 – Col 5 In 67);

wherein the transmitted information is accounting information regarding accounting processing of charged facilities (Pinault Col 4 In 48 – Col 5 In 67). Pinault, however, does, as noted above. It would be obvious to one of ordinary skill in the art to combine the teachings of Caci and Pinault in order to obtain greater security in road to vehicle communications.

Conclusion

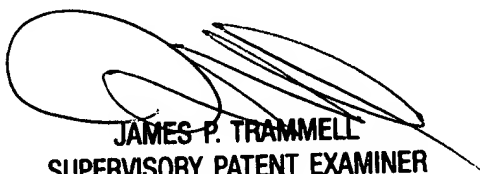
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cristina O Sherr whose telephone number is 703-305-0625. The examiner can normally be reached on Monday through Friday 8:30 to 5:00.

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11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 703-305-9768. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

October 21, 2002


JAMES P. TRAMMELL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600